



Fixed Reader with ReaderService

Reader & microservice for edge integration



RFM5109

APPLICATIONS

- IoT sensing
- Building performance
- Factory 4.0 monitoring
- Data center monitoring
- Cold chain shipping

KEY FEATURES

- Reader temperature range
-20 °C to +55 °C
- 210 x 121 x 31 mm
- 16 SMA antenna ports
- RJ45 Ethernet/PoE
- Smart Passive Sensing™
- Java-based RfmApi Software
- Aggregates RFM5108 data

What's in the system?

The RFM5109 is a wireless reader system for battery-free Smart Passive Sensing™ devices. The RFM5109 reader incorporates a processor running embedded Linux. The RFM5144 ReaderService is included with the system and runs either on the reader itself for full edge processing, or on a PC/server in a distributed processing configuration.

How is it used?

The system includes several sample programs that employ the built-in REST interface to access data from the integrated data-base. These example programs are a starting point for custom code that can be modified and extended for specific needs.

Sensors sold separately

The system includes a selection of temperature and moisture sensors to facilitate evaluation and software development. Other RFMicron sensors can be purchased separately for use with the RFM5109 system.

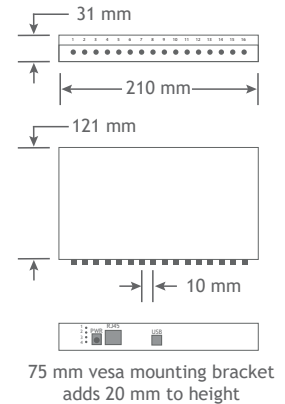
Part numbers

The RFM5109-B is a system-level product that includes the RFM5144-B ReaderService™ software. The RFM5144-B implements a complete Windows® microservice. The RFM5144 ReaderService™ can aggregate data from RFM5108-B readers.

RFM5109 System Performance Data

Fixed wireless reader hardware characteristics for Smart Passive Sensing devices

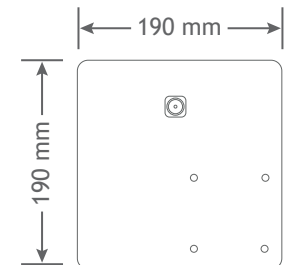
PARAMETER	VALUE
Normal temperature range	-20 °C to +55 °C
Compatible standards	EPC class 1 gen 2 v2 ISO 18000-63 AES authentication in accordance with ISO/IEC 29167-10, CE ETSI EN 302 208, CE ETSI EN 301 489, FCC part 15.247 IC RSS-210, Safety IEC 60950-1
Number of antenna ports	16, 50 Ω, SMA Female
Output power	+30 dBm
Interface options	Ethernet 10/100 Mbit or USB 2.0 device, type B
Processor	Embedded Linux at 700MHz , 256MB RAM, 2GB Flash
Power supply	PoE 802.3af or 240/110 V AC/DC adapter: 12W PoE, 10W DC
Size	210 x 121 x 31 mm
Mounting	Detachable mounting bracket with vesa 75
Shipment method	Individually boxed
Minimum order quantity	1 pc MOQ
Ordering information	RFM5108-BF (FCC 902 to 928 MHz) RFM5108-BE (ETSI/EU 865.6 MHz to 867.6MHz)



Reader

Bolt-attached antenna (RFM5203-A) for use with RFM5109 reader

PARAMETER	VALUE
Antenna performance	865 - 965 MHz, 7.5 dBic, circular polarization
Ordering information	FCC or ETSI/EU included in appropriate set



Fixed wireless reader software characteristics (See RFM5144 for additional details)

PARAMETER	VALUE
Manage reader settings	Radio configuration, regional settings, max output power
Advanced sensor settings	Read algorithms, averaging modes including linear fit algorithm, read counts, verbose data modes, real-time monitoring mode
Message manager	ActiveMQ messaging/integration patterns server
Data output	Embedded MySQL database
Programming interface	REST interface accesses integrated database
Source code	Java library, with example demo source code
Compatible Smart Readers	RFM5108 data can be aggregated using RFM5109

